ABSTRACT

In a photomask blank comprising a light-shielding film

and an antireflective film on a transparent substrate, the
light-shielding film and the antireflective film are formed
of a chromium base material containing oxygen, nitrogen and
carbon such that the content of carbon decreases stepwise or
continuously from a surface side toward the substrate. The
photomask blank can be etched at a controlled rate to
produce perpendicular walls. A photomask is manufactured by
lithographically patterning the photomask blank. The
photomask blank and photomask have uniform film properties
and contribute to the microfabrication of semiconductor ICs
of greater density and finer feature size.